

Remarks

Claims 1 to 42 were in the application as filed.

Claims 12 and 29 have been amended to delete the recitation of prodrugs. Applicants reserve the right to prosecute the deleted subject matter in one or more continuation, continuation-in-part, or divisional applications.

Claims 12, 14, 21, 23 and 24 are amended and claims 1 to 11, 15, 17, 18, 25, and 28 are cancelled, without prejudice, to delete non-elected inventions of Groups II to IX. Applicants reserve the right to prosecute the deleted subject matter in one or more divisional, continuation, or continuation-in-part applications.

Claim 12, which depended upon cancelled claim 1, is amended to place said claim in independent form.

Claim 12 is also amended to indicate that when the heterocyclic radical represented by A is a pyridine, the pyridine is 2,6-disubstituted or 2,4-disubstituted with $Ar_1 - (NR_3)_p - CO$ and $(CO)_m - (NR'_3)_q - X - Ar_2$. Support for this amendment can be found, for example, in the specification on page 9, line 34 to page 10, line 8; on page 10, lines 16 to 23; and on page 39, Example 8.

Claim 16 is amended to replace the term “nitrogen-containing aromatic ring possessing a nitrogen atom in quaternary form” with “ Ar_1 ” and the term “aromatic or nonaromatic ring” with “ Ar_2 ” to reflect the terminology used in claim 12, from which claim 16 depends.

Claims 23, 24, 26, 27, 29, 30 and 37 are amended to change their dependencies from cancelled claim 1 to claim 12.

Claims 32 to 42 stand withdrawn as being directed to non-elected subject matter.

No new matter has been added by these amendments. As presently amended, claims 12 to 14, 16, 19 to 24, 26, 27, 29 to 42 are pending in this application.

Discussion of Telephonic Interview

The telephone interview of December 20, 2007 between Examiner Margaret Seaman and Applicants' undersigned representative is gratefully acknowledged.

The written description rejection of claims 1 to 31 was discussed. The Examiner asserted that formula (Ia) as set forth in claim 12, and as opposed to formula (IB), more clearly indicates that the invention does not encompass compounds having a structure which "just includes a CO and a ring" as maintained in the rejection.

Discussion of Rejection under 35 U.S.C. § 112, first paragraph

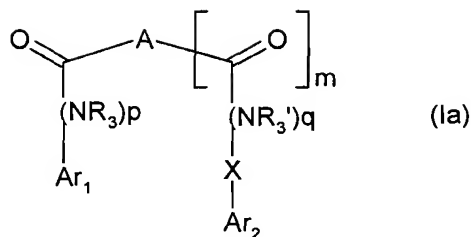
The Examiner rejected claims 1 to 31 under 35 U.S.C. § 112, first paragraph, for the given reason that the specification, while being enabling making salts of the claimed compounds, is allegedly non-enabling for the prodrugs of the claimed compounds.

Without acquiescing to the propriety of the rejection, and solely to advance prosecution, Applicants have amended the present claims to delete the recitation of prodrugs of the claimed compounds. Accordingly, this rejection of claims 1 to 31 under 35 U.S.C. § 112, first paragraph is rendered moot, and withdrawal thereof is respectfully requested.

Claims 1 to 31 are rejected under 35 U.S.C. § 112, first paragraph, for allegedly failing to comply with the written description rejection. The Examiner asserts that "[t]he instant specification does not adequately describe the nexus between activity of binding to the G-quadruplex structure of DNA or RNA which then has a structure which just includes a CO and a ring." (Office Action, page 6).

This rejection is traversed and reconsideration and withdrawal thereof are respectfully requested for the reasons given hereinbelow.

Contrary to the Examiner's assertion, formula (Ia) and formula (IB) of claims 1 to 31 do not encompass compounds having structures which "just include a CO and a ring." The claims, as presently amended, are directed to compounds of formula (Ia):



wherein A, Ar₁, and Ar₂ are all ring systems. Therefore, the claims do not cover compounds containing *only* a CO and a ring. Furthermore, the structure of formula (Ia) is clearly supported in the specification, for example at page 10, line 33 to page 12, line 22, as well as the claims as originally filed. Accordingly, the specification provides adequate written description for the claimed compounds.

The Examiner rejected claims 1 to 31 under 35 U.S.C. § 112, first paragraph, for the given reason that the specification, “while being enabling for compounds of formula Ia wherein A is phenyl, pyrazine or pyridine; p, m, and q are all 1; X is absent; and Ar₁ and Ar₂ are the same, does not reasonably provide enablement for the remainder of the instant claim 1.” (Office Action, page 6).

Applicants traverse this rejection and reconsideration and withdrawal thereof are respectfully requested for the reasons given hereinbelow.

In support of this rejection, the Examiner states that “[t]he compounds that bind to the G-quadruplex structure of DNA or RNA provided by the instant specification (and of this large [M]arkush there are only 15 examples) have either pyridine, pyrazine or phenyl as A of the formula (Ia), m, p and q are all 1, R₃ and R₃' are both H, X is absent, and Ar₁ and Ar₂ are both quinoline” (Office Action, page 8).

As a preliminary matter, Applicants note that Example 12 (page 42 of the specification) describes a compound of the invention wherein X is an alkyl radical. Therefore, the specification does contain a working example wherein X is other than a single bond.

It is well settled that working examples of a claimed invention are not required to satisfy 35 U.S.C. § 112, first paragraph. *See, e.g., In re Strahilevitz*, 212 USPQ 261, 563 (CCPA 1982).

The statute only requires the written description to enable one skilled in the art to make and use the claimed invention.

The specification teaches how to make the compounds of the invention (page 16, line 18 to page 17, line 5, and page 32, line 21 to page 45, line 4) and has provided several working examples (page 32, line 21 to page 45, line 4). The specification also teaches how to test the compounds for their ability to bind the G-quadruplex structure of DNA or RNA and for their anti-telomerase biological activity (pages 21 to 30). Therefore the specification provides considerable direction and guidance as to how to practice the claimed invention.

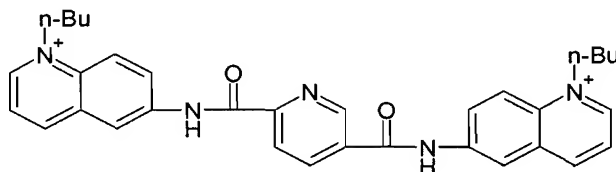
The Examiner has not set forth reasons why compounds outside the scope of “pyridine, pyrazine or phenyl as A of the formula (Ia), m, p and q are all 1, R3 and R3’ are both H, X is absent, and Ar1 and Ar2 are both quinoline” would require *different* techniques or parameters than those described above and in the specification. It is therefore respectfully submitted that the specification fully enables the compounds of the invention, and that the present rejection of claims 1 to 31 should be withdrawn.

Discussion of Rejection under 35 U.S.C. § 102

Claims 1 to 31 are rejected under 35 U.S.C. § 102(b) as being, the Examiner alleges, anticipated by Denny (*J. Med Chem*, Vol. 22, (2) pp. 134-150, 1979) and Atwell (*J. Med Chem*, Vol. 10, (4) pp. 706-713, 1967).

This rejection is traversed and reconsideration and withdrawal thereof are respectfully requested for the reasons given hereinbelow.

The Examiner asserts that Denny and Atwell teach compounds such as:



in which a pyridine radical is 2-5-disubstituted (“para”). Applicants’ claimed compounds, as presently amended, require that when A is a pyridine radical, the radical is 2-4-disubstituted (“meta”) or 2-6-disubstituted (“meta”). Accordingly, Denny and Atwell do not anticipate claims

1 to 31 as presently amended. Accordingly, the rejection of claims 1 to 31 under 35 U.S.C. § 102(b) should be withdrawn.

Copending Applications

Applicants remind the Examiner of copending U.S. Patent Application Nos. 10/658,394 and 10/993,637, and respectfully request the Examiner to review the ongoing prosecution of said applications, including all Office Actions issued therein.

There being no remaining issues, this application is believed in condition for favorable reconsideration and early allowance, and such actions are earnestly solicited.

The Commissioner is hereby authorized to charge any additional fees which may be required by this paper, or credit any overpayment to Deposit Account No. 18-1982.

Respectfully submitted,

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Date

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